

Remarks

Entry of the above amendments is requested for the purpose of removing the grounds for the formal objections in the first Office Action, and for distinguishing the claimed invention from the references cited and applied against the claims.

Regarding the formal rejections, dependent claims 2-5 have been amended to refer to parent claim 1 in a system context; while dependent claims 7 –10 have been amended to refer to parent claim 6 in a method context. As currently amended, it is respectfully submitted that all claims fully comply with the formal requirements of 37 C.F.R. and that the initial objection to originally presented claims 2-5 and 7-10 is no longer applicable.

With reference to the rejection of the originally presented claims under 35 U.S.C. 102(b) as allegedly anticipated by the disclosure of U.S. Patent No. 4,734,862 to Marcus et al. (the '862 Marcus reference), it is respectfully submitted that the invention defined by the current claims is neither anticipated by, nor obvious over, the disclosure of the '862 Marcus reference for the

following reasons. The Marcus '862 reference is directed to a conflict monitor for traffic control systems which monitors the traffic control signals, and the pedestrian WALK and DON'T WALK pedestrian advisory signals, and tests for conflicts between control signals in different channels in the conventional manner. Conflicts are stored in memory and are displayed using a plurality of LED indicators. With the exception of the three specific examples given: a "green"-“green” conflict (Col. 1, lines 28-31); a “green”-“WALK” conflict (Col. 1, lines 35-38); and a “green”-“green” conflict between channel 1 and channel 2 (Col. 7, line 67-Col. 8, line 2), Marcus '862 treats the nature of the conflicts in a general manner (see Col.2, lines 32-36; Col. 3, lines 27-30; Col. 5, line 65-Col. 6, line 2; Col. 6, lines 33-34; Col. 7, lines 37-50; Col. 7, lines 61-67; and Col. 8, lines 13-15). Marcus is absolutely silent with respect to testing for Red Fail faults.

In contrast, independent system claim 1 is expressly directed to a system for testing for a unique Red Fail fault involving the control signals in a pair of channels having an assigned parent channel-child channel relationship. More specifically, claim 1 requires that the system have a monitoring means for detecting a Red Fail fault from the signals in the parent channel and the child channel and for generating a Red Fail fault signal when all parent channel signals and some child channel signals are concurrently inactive. While the Examiner has cited Col. 1, lines 39-45, monitoring means 8, and Fig. 4 for the supposed teaching of assignment means for establishing a parent channel-child channel relationship for the purpose of Red Fail fault testing, and for the supposed teaching of detecting a Red Fail fault from the signals in the parent channel and the child channel, there is nothing in the referenced portions of Marcus which supports this assertion. As noted above, Marcus is absolutely silent with respect to testing for Red Fail faults. This is not surprising, since the entire thrust of Marcus is testing for conflicts between channel signals from different channels; while conventional Red Fail fault testing involves only the signals in a single channel (see application, page 1, lines 23-28 for a description of conventional Red Fail fault testing). Since Marcus does not at all treat the subject of Red Fail fault testing, it is respectfully submitted that claim 1 is clearly patentable over the disclosure of the Marcus '862 reference.

Claim 2 is directed to a manually settable switch for enabling and disabling the monitoring means for detecting a Red Fail fault from the signals in a parent channel and a child channel. The claimed switch enables the operator to select whether or not this functional capability is to be used in a given installation. The switch 10 shown in the Marcus '862 reference and cited by the Examiner serves an entirely different purpose-viz., to cause the microprocessor 2 to activate the display 14 to display the status of each channel at the time a prior conflict occurred (see Col. 3, line 66-Col. 4, line 1; Col. 8, lines 25-51). There is nothing in Marcus '862 which directly teaches or inherently suggests the use of switch 10 (or any other switch) to enable and disable the monitoring means. Accordingly, it is respectfully suggested that claim 2 is clearly patentable over the disclosure of the Marcus '862 reference.

Claim 3 is directed to a display for indicating whether a Red Fail fault has occurred. While the Examiner has cited display 14 of Marcus '862 as an alleged anticipation of this claim, it is respectfully submitted that the Marcus '862 display does not possess this functional capability. The Marcus '862 display is described in Col. 4, lines 2-5; Col. 7, lines 52-668; and Col. 8, lines 1-52. As clearly taught in these portions of the reference, the display 14 provides visual indications of the status of each of the channels during prior conflicts or other prior errors. There is nothing in Marcus '862 which teaches directly or inherently suggests providing a display for the purpose of indicating the occurrence of a Red Fail fault from the signals in a parent channel and a child channel. Consequently, it is respectfully submitted that claim 3 is clearly patentable over the disclosure of the Marcus '862 reference.

Claim 4 is directed to a system for detecting a Red Fail fault from all the signals in a parent channel and the Green and Walk signals in a child channel. In the system according to the invention, it is possible to specify which particular child channel signals are to be examined for the purpose of the Red Fail fault test. Since there is nothing in Marcus '862 disclosing a Red Fail fault test, much less a Red Fail fault test involving the control signals from two channels assigned a parent channel-child channel relationship, Marcus fails as a teaching reference for the system of claim 4.

Claim 5 is directed to a system for detecting a Red Fail fault from all the signals in a parent channel and the Green, Walk, and Yellow signals in a child channel. Since there is nothing in Marcus '862 disclosing a Red Fail fault test, much less a Red Fail fault test involving the control signals from two channels assigned a parent channel-child channel relationship, Marcus fails as a teaching reference for the system of claim 5.

Method claim 6 is directed to a method of monitoring for Red Fail faults in a traffic control system which includes the steps of establishing a parent channel-child channel relationship for the purpose of Red Fail fault testing and detecting a Red Fail fault from the signals in the parent channel and the child channel by generating a Red Fail fault signal when all parent channel signals and some child channel signals are concurrently inactive. While the Examiner has cited Col. 1, lines 39-45, monitoring means 8, and Fig. 4 for the supposed teaching of assignment means for establishing a parent channel-child channel relationship for the purpose of Red Fail fault testing, and for the supposed teaching of detecting a Red Fail fault from the signals in the parent channel and the child channel, there is nothing in the referenced portions of Marcus which supports this assertion. As noted above, Marcus is absolutely silent with respect to testing for Red Fail faults. This is not surprising, since the entire thrust of Marcus is testing for conflicts between channel signals from different channels; while conventional Red Fail fault testing involves only the signals in a single channel (see application, page 1, lines 23-28 for a description of conventional Red Fail fault testing). Since Marcus does not at all treat the subject of Red Fail fault testing, it is respectfully submitted that claim 6 is clearly patentable over the disclosure of the Marcus '862 reference.

Dependent claims 7-10 are the method counterparts to dependent system claims 2-5 and are believed to be clearly patentable over the Marcus '862 reference for the reasons advanced above.

Newly presented dependent system claim 11 and dependent method claim 12 are directed to the minimum time period required before a Red Fail fault is established. This feature is described in the subject application on page 6, in lines 1-2. In particular, to avoid false generation of a Red Fail fault signal, in the preferred embodiment the fault condition must persist for a minimum time period

(1000 msec. in the specific example given) before the fault signal is generated. It is respectfully submitted that these claims are clearly patentable over the disclosure of Marcus '862 for reasons already advanced above.

The remaining references have been carefully considered, but are not seen to supply the deficiencies noted in the Marcus '862 reference.

In view of the above remarks, it is respectfully submitted that this application is clearly in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this case for issue.

If deemed useful in any further prosecution of this application, the Examiner is invited to contact the undersigned at 702-270-8853.

Accompanying this amendment is a notice of change of address. Please direct all future correspondence in this case to the new address.

Respectfully Submitted,



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